Egyptian Herbal Monograph

Volume 3

Medicinal plants used in Egypt

Egyptian Drug Authority (EDA)

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***Aesculus hippocastanum* L.** أبو فروة الحصان

1. Names & Synonyms (1)

***Aesculus hippocastanum* L.**
Syns.: *Pawia hippocastanum* (L.) Kuntze, *Aesculus asplenifolia* Loudon, *Aesculus castanea* Gilib., *A. hippocastanum* f. albovariegatum (Weston) Rehder.
Family: Sapindaceae.
Arabic: Abu farwat el hhussan أبو فروة الحصان (2).
English name: Horse chestnut (2-6).

2. Parts used for medicinal purpose

Dried seeds (3- 5) and Bark (6).

3. Major chemical constituents

Seeds:

- Triterpene saponins: Escin (complex mixture of mainly two classes, α- and β-escins) (7, 8).
- Flavonoids: Glycosides of quercetin and kaempferol (4, 9 , 10).
- Others: Tannins, fatty acids (mainly palmitic acid) (9), allantoin, amino acids (adenine, adenosine, guanine), choline, citric acid and phytosterol (4).

Bark (11)**:**

- Coumarin glycosides: Esculin and fraxin.
- Tannins**:** Epicatechin and procyanidin A2.

4. Medicinal Uses (Indications)

A. Treatment of chronic venous insufficiency, which is characterised by swollen legs, varicose veins, feeling of heaviness, pain, tiredness, itching, tension and cramps in the calves (3, 5).

B. Symptomatic relief of itching and burning associated with haemorrhoids, after serious conditions have been excluded by a medical doctor (3, 6).

5. Herbal preparations correlated to medicinal use

1. Powdered drug

1.1 Seeds (3).
1.2 Bark (6).

2. Seeds extracts (3, 5)

2.1 Dry extracts

2.1.1 Extraction solvent ethanol 40-80% V/V, standardised to contain 6.5-10% triterpene glycosides, calculated as protoaescigenin.
2.1.2 Extraction solvent ethanol 25-50% V/V corresponding to a specified amount of triterpene glycosides, calculated as protoaescigenin.
2.1.3 Extraction solvent ethanol 50% V/V.
2.1.4 Extraction solvent ethanol 60% V/V.
2.1.5 Extraction solvent ethanol equivalent to 50–150 mg as aescin (2, 4, 13).
2.1.6 Standardized extract (equivalent to 100mg aescin) containing 16–20% triterpene glycosides, calculated as aescin (2).
2.1.7 Extraction solvent water.

2.2 Liquid extract

2.2.1 Extraction solvent ethanol 50% V/V.
2.2.2 Extraction solvent ethanol 19% m/m and 55% V/V .

3) Seeds tincture (3)

Herbal preparations are in pharmaceutical dosage forms. The pharmaceutical form should be described by the pharmacopoeia full standard term.

6. Posology and method of administration correlated to medicinal use

Oral use:
Preparation 1
Indications A and B (3, 5-6)

Adults and elderly

Preparation 1.1: Corresponding to 0.3 – 5 g, daily (3).

Preparation 1.2: Single dose: 275 mg 3 to 6 times, daily (6).

Preparation 2
Adults and elderly
Indication A
Preparation 2.1.1. Standardised dry extract corresponding to a content of 21 mg triterpene

glycosides calculated as protoaescigenin, 2 times daily (5) .

Preparation 2.1.5
250.0 – 312.5 mg of a standardized powdered extract containing 16 – 20% triterpene glycosides calculated as aescin, 2 times daily (2).

Indications A and B
Preparation 2.1.
Standardized dry extract equivalent to 50–150 mg as aescin, in divided doses (3-4, 13).

Preparation 2.1.7
Single dose: 99 mg of the dried extract, 2 times daily. Daily dose: 198 mg (5).

Preparation 2.2.2
Single dose: 154 - 300 mg, 3-4 times daily. Daily dose: 462-616 mg (5).
Single dose: 154 - 300 mg, 2-4 times daily. Daily dose: 462-616 mg.

Preparation 3 (3)
Indications A and B
Adults and elderly:

- Corresponding to 0.3 - 5 g dried seeds daily (3).
- 5 – 15 ml daily of 1:5 (12).
- ml in 1/2 cup of water, 2 - 4 times daily (14)

Method of administration: Oral use

External Use [Cutaneous use]
Preparation 2
Indication A (5)
Adults and elderly
Preparation 2.1.3
In semi-solid dosage forms: amount equivalent to 3.8% herbal preparation**,** apply a thin layer on the affected area, 1-3 times daily

Preparation 2.1.4
In semi-solid dosage forms: amount equivalent to 1.6% herbal preparation, apply a thin layer on the affected area, 1-3 times daily.

Indications A and B
Adolescents, adults and elderly
Preparation 2.1.2
In semi-solid dosage forms: amount equivalent to 0.4% triterpene glycosides, calculated as protoaescigenin, apply a thin layer on the affected area, 1-3 times daily**.**
Preparation 2.2.1.
In semi-solid dosage forms: amount equivalent to 20% herbal preparation, apply a thin layer on

the affected area, 1-3 times daily.

Method of administration: External use [Cutaneous use].

Duration of use

For indication A

If the symptoms persist longer than **2 weeks** during the use of the medicinal product, a doctor or a pharmacist should be consulted, (5,6) except for preparation 2.1.1: at least **4 weeks** of treatment may be required before any beneficial effect is observed. Long-term use is possible in consultation with a doctor (5).

For indication B

For seed preparations: If the symptoms persist longer than **5 days** during the use of the medicinal product, a doctor or a pharmacist should be consulted (5).

For bark preparations: If the symptoms persist longer than **2 weeks** during the use of the medicinal product, a doctor or a pharmacist should be consulted (6).

7. Contraindications (5, 6)

- Hypersensitivity to the active substances and to other plants of the same family.

8. Special warnings and precautions for use

- If the symptoms worsen or signs of skin infections occur during the use of the medicinal product, a doctor or a pharmacist should be consulted. (3, 5).
- **Indication A:** If there is an inflammation of the skin, thrombophlebitis, varicosis or subcutaneous induration, ulcers, sudden swelling of one or both legs, cardiac or renal insufficiency, a doctor should be consulted (5).
- **Indication B:** If rectal bleeding occurs, a doctor should be consulted (6).

- For indication (A) the use of seed preparations in adolescents under 18 years of age is not recommended because of concerns requiring medical advice (5).
-For indication (B) the use of seed preparations, in children below 12 years of age is not recommended (5).
-For indication (A and B) the use of bark preparations in children and adolescents under 18 years of age has not been established (6).

9. Interactions with other medicinal products and other forms of interaction

- None reported (5, 6).
- Because of the coumarin component of horse chestnut bark, it may interact with anticoagulant drugs, herbs or supplements, which may affect platelet aggregation (15).

10. Fertility, pregnancy and lactation (3 , 5-6).

- Safety during pregnancy and lactation has not been established. In the absence of sufficient data, the use during pregnancy and lactation is not recommended.

- No fertility data available.

11. Effects on ability to drive and use machines (5,6)

No studies on the effect on the ability to drive and use machines have been performed.

12. Undesirable effects

- If adverse reactions occur, a doctor or a pharmacist should be consulted.
- **Oral use of seed preparations:** Gastrointestinal complaints, headache, vertigo, itching and allergic reactions (3, 5).
- **Cutaneous use of seed preparations:** Hypersensitivity reactions of the skin (itching and erythema) (3, 5)
- None known for bark preparations (6).

13. Overdose (5,6)

- No case of overdose has been reported.

14. Relevant biological activities

- Not required as per Egyptian guidelines for registration of herbal medicines.

15. Additional Information

- To ensure the effect, horse chestnut seeds should only be used in the form of finished medicinal products (16).

16. Date of compilation/last revision

26/11/2023

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